

SPECIFICATION AND MAINTENANCE, PREPARED BY GOYA WORKS

CALCULATION OF THE EXTRACT SYSTEM

Calculations		Thermal Convection Method			
Item	Plan size, mm	Power	M2	Coefficient	Flow rate m3s-1
Griddle	900x600	Gas	0.54	0.950	0.520
Deep fat frier	450*600	Gas	0.27	0.500	0.135
Range Oven	900x600	Gas	0.540	0.600	0.320
Combination Oven	800x800	Gas	0.640	0.350	0.2240
Theoretical extract flow rate required					1.2
Canopy Factor, wall to wall					x 1.05
Specific extract flow rate required					1.3

Dwell time

Dwell time per second $0.1/1.3=0.08$ 1/s

for 600x600x600mm 3x activated side carbon dwell time achieved 0.2 1/s

For 3x activated site carbon, will achieve 0.2 1/s dwell time

Site carbon is each cell of the carbon filter. The reference number is SITE SAFE PA240824 has 3x site safe carbon cells. Its dimensions are 594x196x597mm

Flow rate: 1.4 m3/s --- 5040 m3/h

ESP 3000E

Electrostatic Precipitators ('ESPs') have been specifically designed for kitchen extract systems and have integral sumps to collect the oil, grease and smoke particles filtered out of the exhaust. This not only simplifies servicing, but eradicates potentially dangerous spillage from the bottom of the units and greatly cuts down on buildups of grease within the ducting.

The ionisation voltage has been designed to run at a negative potential which enhances the ionisation of particles and also produces more ozone which is helpful in reducing cooking odours. Our ESP units fit in-line with the kitchen ducting and can be configured modularly to cope with all extract volume requirements.

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Why we recommend the ESP3000E?

The DEFRA Guide Risk Assessment for Odour confirms at Table 1 that the odour and grease level loading for Italian restaurants is the lowest of four levels. The nature of the food offer and the very limited types of cooking at 166 High Street suggest that the odour and grease loading will be very low.

The ESP 3000E can handle up to 1.4 m³/sec of air flow. The appropriate air flow for 166 High street is 1.365 m³/s, please refer to the information listed in the table above. The ESP3000E will reduce any type of odour and also helps to reduce grease.

MAINTENANCE

- All maintenance should be carried out in accordance with the planned maintenance set by the installation contractor as set out below and by the Technical and Operations Manual for the ESP3000E at section 7 (Maintenance and Cleaning).
- All maintenance should be carried out by a trained operative.
- When handling any components suitable PPE should be used - gloves, eye protection and access equipment.

Carbon Units

Frequent deep cleaning of the activated side carbon should be replaced with new activated side carbons every 12 months for light use or 6 months for moderate use.

ESP Unit

Basic Maintenance Activities	Frequency
Clean the inside of the Unit and remove dust and grease from the filter compartment	From once a week to once every 3 months depending on the degree of pollution.
Clean the Mesh Pre-filter, with particular attention to the ESP Collector Cell and the Mesh Post-filter and check for damage	From once a week to once every 3 months depending on the degree of pollution.
Clean the outside of the Unit with mild detergent	Every 6 months
Check the door sealing material	Every 12 months